

54203-H-PCT-US.ST25.txt
SEQUENCE LISTING



<110> Kwong, Peter D.
Hendrickson, Wayne A.
Sodroski, Joseph G.
Wyatt, Richard T.

<120> CRYSTALLOGRAPHY-RELATED METHOD FOR IDENTIFYING POTENTIAL
INHIBITORS OF THE CD4-GP120 INTERACTION

<130> 54203-H-PCT-US

<140> 09/856,200
<141> 2003-01-03

<150> PCT/US98/23905
<151> 1998-11-10

<150> US 09/100,631
<151> 1998-06-18

<150> US 08/976,741
<151> 1997-11-24

<150> US 09/100,763
<151> 1998-06-18

<150> US 08/966,987
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<150> US 09/100,529
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<150> US 08/967,403
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<150> US 09/100,762
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<150> US 08/966,932
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<150> US 09/100,521
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<160> 13

<170> PatentIn version 3.3

<210> 1
<211> 320
<212> PRT
<213> Homo sapiens

<400> 1

Gly Ala Arg Ser Glu Val Val Leu Val Asn Val Thr Glu Asn Phe Asn
1 5 10 15

Met Trp Lys Asn Asp Met Val Glu Gln Met His Glu Asp Ile Ile Ser
 20 25 30
 Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
 35 40 45
 Val Gly Ala Gly Ser Cys Asn Thr Ser Val Ile Thr Gln Ala Cys Pro
 50 55 60
 Lys Val Ser Phe Glu Pro Ile Pro Ile His Tyr Cys Ala Pro Ala Gly
 65 70 75 80
 Phe Ala Ile Leu Lys Cys Asn Asn Lys Thr Phe Asn Gly Thr Gly Pro
 85 90 95
 Cys Thr Asn Val Ser Thr Val Gln Cys Thr His Gly Ile Arg Pro Val
 100 105 110
 Val Ser Thr Gln Leu Leu Leu Asn Gly Ser Leu Ala Glu Glu Glu Val
 115 120 125
 Val Ile Arg Ser Val Asn Phe Thr Asp Asn Ala Lys Thr Ile Ile Val
 130 135 140
 Gln Leu Asn Thr Ser Val Glu Ile Asn Cys Thr Gly Ala Gly His Cys
 145 150 155 160
 Asn Ile Ser Arg Ala Lys Trp Asn Asn Thr Leu Lys Gln Ile Ala Ser
 165 170 175
 Lys Leu Arg Glu Phe Gly Asn Asn Lys Thr Ile Ile Phe Lys Gln Ser
 180 185 190
 Ser Gly Gly Asp Pro Glu Ile Val Thr His Ser Phe Asn Cys Gly Gly
 195 200 205
 Glu Phe Phe Tyr Cys Asn Ser Thr Gln Leu Phe Asn Ser Thr Trp Phe
 210 215 220
 Asn Ser Thr Trp Ser Thr Glu Gly Ser Asn Asn Thr Glu Gly Ser Asp
 225 230 235 240
 Thr Ile Thr Leu Pro Cys Arg Ile Lys Gln Ile Ile Asn Met Trp Gln
 245 250 255
 Lys Val Gly Lys Ala Met Tyr Ala Pro Pro Ile Ser Gly Gln Ile Arg
 260 265 270

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Cys Ser Ser Asn Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Asn
275 280 285

Ser Asn Asn Glu Ser Glu Ile Phe Arg Pro Gly Gly Gly Asp Met Arg
290 295 300

Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu
305 310 315 320

<210> 2
<211> 300
<212> PRT
<213> Homo sapiens

<400> 2

Glu Ile Val Leu Glu Asn Val Thr Glu Ser Phe Asn Met Trp Lys Asn
1 5 10 15

Asp Met Val Asp Gln Met His Gln Asp Val Ile Ser Leu Trp Asp Gln
20 25 30

Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys Val Asn Cys Asn
35 40 45

Thr Ser Ala Ile Thr Gln Ala Cys Pro Lys Val Thr Leu Asp Pro Ile
50 55 60

Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys Asn
65 70 75 80

Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr Val
85 90 95

Gln Cys Thr His Gly Ile Lys Pro Val Ile Ser Thr Gln Leu Leu Leu
100 105 110

Asn Gly Ser Ile Ala Glu Glu Glu Ile Ile Ile Arg Ser Glu Asn Leu
115 120 125

Thr Asn Asn Ala Lys Ile Ile Ile Val Gln Leu Asn Lys Ser Val Glu
130 135 140

Ile Asn Cys Ala Tyr Cys Asn Ile Ser Arg Asn Glu Trp Asn Ile Thr
145 150 155 160

Leu Gln Trp Val Arg Glu Lys Leu Lys Arg His Phe Pro Asn Lys Thr
165 170 175

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Ile Asn Phe Thr Gln Pro Ser Gly Gly Asp Leu Glu Ile Thr Thr His
180 185 190

Ser Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Asn Thr Ser Ser Leu
195 200 205

Phe Asn Ser Ser Asp Asn Asn Asn Ser Thr Ile Ile Thr Leu Pro Cys
210 215 220

Arg Ile Lys Gln Ile Ile Asn Met Trp Gln Gly Val Gly Arg Ala Met
225 230 235 240

Tyr Ala Pro Pro Ile Lys Gly Lys Ile Thr Cys Arg Ser Asn Ile Thr
245 250 255

Gly Leu Leu Leu Thr Arg Asp Gly Gly Glu Thr Ser Glu Thr Asn Ser
260 265 270

Thr Glu Thr Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn Trp Arg
275 280 285

Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Val Lys
290 295 300

<210> 3
<211> 313
<212> PRT
<213> Homo sapiens

<400> 3

Glu Tyr Pro Leu His Asn Val Thr Asp Asp Phe Asn Ile Trp Lys Asn
1 5 10 15

Tyr Met Val Glu Gln Met Gln Glu Asp Ile Ile Ser Leu Trp Asp Gln
20 25 30

Ser Leu Lys Pro Cys Val Gln Met Thr Phe Leu Cys Val Asn Cys Asn
35 40 45

Ser Thr Thr Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Glu Pro Ile
50 55 60

Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Phe Lys Cys Asn
65 70 75 80

Ser Thr Glu Phe Asn Gly Thr Gly Thr Cys Arg Asn Ile Thr Val Val
85 90 95

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Thr Cys Thr His Gly Ile Arg Pro Thr Val Ser Thr Gln Leu Ile Leu
100 105 110

Asn Gly Thr Leu Ser Lys Gly Lys Ile Arg Met Met Ala Lys Asp Ile
115 120 125

Leu Glu Gly Gly Lys Asn Ile Ile Val Thr Leu Asn Ser Thr Leu Asn
130 135 140

Met Thr Cys Glu Tyr Cys Lys Tyr Asn Ala Thr Asp Trp Gly Lys Ile
145 150 155 160

Leu Lys Gln Thr Ala Glu Arg Tyr Leu Glu Leu Val Asn Asn Thr Gly
165 170 175

Ser Ile Asn Met Thr Phe Asn His Ser Ser Gly Gly Asp Leu Glu Val
180 185 190

Thr His Leu His Phe Asn Cys His Gly Glu Phe Phe Tyr Cys Asn Thr
195 200 205

Ala Lys Met Phe Asn Tyr Thr Phe Ser Cys Asn Gly Thr Thr Cys Ser
210 215 220

Val Ser Asn Val Ser Gln Gly Asn Asn Gly Thr Leu Pro Cys Lys Leu
225 230 235 240

Arg Gln Val Val Arg Ser Trp Ile Arg Gly Gln Ser Gly Leu Tyr Ala
245 250 255

Pro Pro Ile Lys Gly Asn Leu Thr Cys Met Ser Asn Ile Thr Gly Met
260 265 270

Ile Leu Gln Met Asp Asn Thr Trp Asn Ser Ser Asn Asn Asn Val Thr
275 280 285

Phe Arg Pro Ile Gly Gly Asp Met Lys Asp Ile Trp Arg Thr Glu Leu
290 295 300

Phe Asn Tyr Lys Val Val Arg Val Lys
305 310

<210> 4
<211> 299
<212> PRT
<213> Homo sapiens

<400> 4

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Glu Ile Thr Leu Asn Val Thr Glu Ala Phe Asp Ala Trp Asn Asn Thr
 1 5 10 15
 Val Thr Glu Gln Ala Ile Glu Asp Val Trp His Leu Phe Glu Thr Ser
 20 25 30
 Ile Lys Pro Cys Val Lys Leu Thr Pro Leu Cys Val His Cys Asn Thr
 35 40 45
 Ser Val Ile Thr Glu Ser Cys Asp Lys His Tyr Trp Asp Ala Ile Arg
 50 55 60
 Phe Arg Tyr Cys Ala Pro Pro Gly Tyr Ala Leu Leu Arg Cys Asn Asp
 65 70 75 80
 Thr Asn Tyr Ser Gly Phe Ala Pro Asn Cys Ser Lys Val Val Ala Ser
 85 90 95
 Thr Cys Thr Arg Met Met Glu Thr Gln Thr Ser Thr Trp Phe Gly Phe
 100 105 110
 Asn Gly Thr Arg Ala Glu Asn Thr Arg Tyr Ile Tyr Trp His Gly Arg
 115 120 125
 Asp Asn Arg Thr Ile Ile Ser Leu Asn Lys Tyr Tyr Asn Leu Ser Leu
 130 135 140
 His Cys Lys Trp Cys Trp Phe Lys Gly Lys Trp Lys Asp Ala Met Gln
 145 150 155 160
 Glu Val Lys Glu Thr Leu Ala Lys His Pro Arg Tyr Arg Gly Thr Asn
 165 170 175
 Asp Thr Arg Asn Ile Ser Phe Ala Ala Pro Gly Lys Gly Ser Asp Pro
 180 185 190
 Glu Val Ala Tyr Met Trp Thr Asn Cys Arg Gly Glu Phe Leu Tyr Cys
 195 200 205
 Asn Met Thr Trp Phe Leu Asn Trp Ile Glu Asn Lys Thr His Arg Asn
 210 215 220
 Tyr Ala Pro Cys His Ile Lys Gln Ile Ile Asn Thr Trp His Lys Val
 225 230 235 240
 Gly Arg Asn Val Tyr Leu Pro Pro Arg Glu Gly Glu Leu Ser Cys Asn
 245 250 255

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Ser Thr Val Thr Ser Ile Ile Ala Asn Ile Asp Trp Gln Asn Asn Asn
260 265 270

Gln Thr Asn Ile Thr Phe Ser Ala Glu Val Ala Glu Leu Tyr Arg Leu
275 280 285

Glu Leu Gly Asp Tyr Lys Leu Val Glu Ile Thr
290 295

<210> 5
<211> 296
<212> PRT
<213> Homo sapiens

<400> 5

Glu Val Pro Leu Asn Ile Thr Glu Ala Phe Glu Ala Trp Asp Asn Pro
1 5 10 15

Leu Val Lys Gln Ala Glu Ser Asn Ile His Leu Leu Phe Glu Gln Thr
20 25 30

Met Arg Pro Cys Val Lys Leu Ser Pro Ile Cys Ile His Cys Asn Asp
35 40 45

Ser Val Ile Lys Glu Ala Cys Asp Lys Thr Tyr Trp Asp Thr Leu Arg
50 55 60

Val Arg Tyr Cys Ala Pro Ala Gly Tyr Ala Leu Leu Lys Cys Asn Asp
65 70 75 80

Lys Asp Tyr Arg Gly Phe Ala Pro Lys Cys Lys Asn Val Ser Val Val
85 90 95

His Cys Thr Arg Leu Ile Asn Thr Thr Ile Thr Thr Gly Ile Gly Leu
100 105 110

Asn Gly Ser Arg Ser Glu Asn Arg Thr Glu Ile Trp Gln Lys Gly Gly
115 120 125

Asn Asp Asn Asp Thr Val Ile Ile Lys Leu Asn Lys Phe Tyr Asn Leu
130 135 140

Thr Val Arg Cys Arg Trp Cys His Phe Gln Gly Asp Trp Lys Gly Ala
145 150 155 160

Trp Lys Glu Val Arg Glu Glu Val Lys Lys Val Lys Asn Leu Thr Glu
165 170 175

Val Ser Ile Glu Asn Ile His Leu Arg Arg Ile Trp Gly Asp Pro Glu
180 185 190

Ser Ala Asn Phe Trp Phe Asn Cys Gln Gly Glu Phe Phe Thr Cys Lys
195 200 205

Met Asp Trp Phe Ile Asn Tyr Leu Asn Asn Arg Thr Glu Asp Ala Glu
210 215 220

Gly Thr Asn Arg Thr Cys Asp Lys Gly Lys Pro Gly Pro Gly Pro Cys
225 230 235 240

Val Gln Arg Thr Tyr Val Ala Cys His Ile Arg Gln Val Val Asn Asp
245 250 255

Trp Tyr Thr Val Ser Lys Lys Val Tyr Ala Pro Pro Arg Glu Gly His
260 265 270

Leu Glu Cys Asn Ser Ser Cys Thr Ala Leu Tyr Val Ala Ile Asp Tyr
275 280 285

Asn Asn Lys Ser Gly Pro Ile Asn
290 295

<210> 6
<211> 479
<212> PRT
<213> Homo sapiens

<400> 6

Thr Glu Lys Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
1 5 10 15

Glu Ala Thr Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala Tyr Asp
20 25 30

Thr Glu Val His Asn Val Trp Ala Thr His Ala Cys Val Pro Thr Asp
35 40 45

Pro Asn Pro Gln Glu Val Val Leu Val Asn Val Thr Glu Asn Phe Asn
50 55 60

Met Trp Lys Asn Asp Met Val Glu Gln Met His Glu Asp Ile Ile Ser
65 70 75 80

Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Tyr Pro Leu Cys
85 90 95

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Val Ser Leu Lys Cys Thr Asp Leu Lys Asn Asp Thr Asn Thr Asn Ser
 100 105 110
 Ser Ser Gly Glu Met Met Met Glu Lys Gly Glu Ile Lys Asn Cys Ser
 115 120 125
 Phe Asn Ile Ser Thr Ser Ile Arg Gly Lys Val Gln Lys Glu Tyr Ala
 130 135 140
 Phe Phe Tyr Lys Leu Asp Ile Ile Pro Ile Asp Asn Asp Thr Thr Ser
 145 150 155 160
 Tyr Thr Leu Thr Ser Cys Asn Thr Ser Val Ile Thr Gln Ala Cys Pro
 165 170 175
 Lys Val Ser Phe Glu Pro Ile Pro Ile His Tyr Cys Ala Pro Ala Gly
 180 185 190
 Phe Ala Ile Leu Lys Cys Asn Asn Lys Thr Phe Asn Gly Thr Gly Pro
 195 200 205
 Cys Thr Asn Val Ser Thr Val Gln Cys Thr His Gly Ile His Pro Val
 210 215 220
 Val Ser Thr Gln Leu Leu Leu Asn Gly Ser Leu Ala Glu Glu Glu Val
 225 230 235 240
 Val Ile Arg Ser Ala Asn Phe Thr Asp Asn Ala Lys Lys Ile Ile Val
 245 250 255
 Gln Leu Asn Gln Ser Val Glu Ile Asn Cys Thr Arg Pro Asn Asn Asn
 260 265 270
 Thr Arg Lys Ser Ile Arg Ile Gln Arg Gly Pro Gly Arg Ala Phe Val
 275 280 285
 Thr Ile Gly Lys Ile Gly Asn Met Arg Gly Ala His Cys Ile Asn Ser
 290 295 300
 Arg Ala Lys Trp Asn Asn Thr Leu Lys Gln Ile Ala Ser Lys Leu Arg
 305 310 315 320
 Glu Gln Phe Gly Asn Asn Lys Thr Ile Ile Phe Lys Gln Ser Ser Gly
 325 330 335
 Gly Asp Pro Glu Ile Val Thr His Ser Phe Asn Cys Gly Gly Glu Phe

340

Phe Tyr Cys Asn Ser Thr Gln Leu Phe Asn Ser Thr Trp Phe Asn Ser
355 360 365

Thr Trp Ser Thr Glu Gly Ser Asn Asn Thr Glu Gly Ser Asp Thr Ile
370 375 380

Thr Leu Pro Cys Arg Ile Lys Gln Phe Ile Asn Met Trp Gln Glu Val
385 390 395 400

Gly Lys Ala Met Tyr Ala Pro Pro Ile Ser Gly Gln Ile Arg Cys Ser
405 410 415

Ser Asn Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Asn Asn Asn
420 425 430

Asn Glu Ser Glu Ile Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn
435 440 445

Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu
450 455 460

Gly Val Ala Pro Thr Lys Ala Lys Arg Arg Val Val Gln Arg Glu
465 470 475

<210> 7
<211> 40
<212> PRT
<213> Homo sapiens

<400> 7

Thr Glu Asn Phe Asn Met Trp Lys Asn Asp Met Val Glu Gln Met His
1 5 10 15

Glu Asp Ile Ile Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys
20 25 30

Leu Thr Pro Leu Cys Val Gly Ala
35 40

<210> 8
<211> 106
<212> PRT
<213> Homo sapiens

<400> 8

Gly Ser Cys Asn Thr Ser Val Ile Thr Gln Ala Cys Pro Lys Val Ser
1 5 10 15

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Phe Glu Pro Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Phe Ala Ile
20 25 30

Leu Lys Cys Asn Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Thr Asn
35 40 45

Val Ser Thr Val Gln Cys Thr His Gly Ile Arg Pro Val Val Ser Thr
50 55 60

Gln Leu Leu Leu Asn Gly Ser Leu Ala Glu Glu Glu Val Val Ile Arg
65 70 75 80

Ser Val Asn Phe Thr Asp Asn Ala Lys Thr Ile Ile Val Gln Leu Asn
85 90 95

Thr Ser Val Glu Ile Asn Cys Thr Gly Ala
100 105

<210> 9
<211> 68
<212> PRT
<213> Homo sapiens

<400> 9

Gly His Cys Asn Ile Ser Arg Ala Lys Trp Asn Asn Thr Leu Lys Gln
1 5 10 15

Ile Ala Ser Lys Leu Arg Glu Gln Phe Gly Asn Asn Lys Thr Ile Ile
20 25 30

Phe Lys Gln Ser Ser Gly Gly Asp Pro Glu Ile Val Thr His Ser Phe
35 40 45

Asn Cys Gly Gly Glu Phe Phe Tyr Cys Asn Ser Thr Gln Leu Phe Asn
50 55 60

Ser Thr Trp Phe
65

<210> 10
<211> 83
<212> PRT
<213> Homo sapiens

<400> 10

Gly Ser Asp Thr Ile Thr Leu Pro Cys Arg Ile Lys Gln Ile Ile Asn
1 5 10 15

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Met Trp Gln Lys Val Gly Lys Ala Met Tyr Ala Pro Pro Ile Ser Gly
20 25 30

Gln Ile Arg Cys Ser Ser Asn Ile Thr Gly Leu Leu Leu Thr Arg Asp
35 40 45

Gly Gly Asn Ser Asn Asn Glu Ser Glu Ile Phe Arg Pro Gly Gly Gly
50 55 60

Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val
65 70 75 80

Lys Ile Glu

<210> 11
<211> 181
<212> PRT
<213> Homo sapiens

<400> 11

Lys Lys Val Val Leu Gly Lys Lys Gly Asp Thr Val Glu Leu Thr Cys
1 5 10 15

Thr Ala Ser Gln Lys Lys Ser Ile Gln Phe His Trp Lys Asn Ser Asn
20 25 30

Gln Ile Lys Ile Leu Gly Asn Gln Gly Ser Phe Leu Thr Lys Gly Pro
35 40 45

Ser Lys Leu Asn Asp Arg Ala Asp Ser Arg Arg Ser Leu Trp Asp Gln
50 55 60

Gly Asn Phe Pro Leu Ile Ile Lys Asn Leu Lys Ile Glu Asp Ser Asp
65 70 75 80

Thr Tyr Ile Cys Glu Val Glu Asp Gln Lys Glu Glu Val Gln Leu Leu
85 90 95

Val Phe Gly Leu Thr Ala Asn Ser Asp Thr His Leu Leu Gln Gly Gln
100 105 110

Ser Leu Thr Leu Thr Leu Glu Ser Pro Pro Gly Ser Ser Pro Ser Val
115 120 125

Gln Cys Arg Ser Pro Arg Gly Lys Asn Ile Gln Gly Gly Lys Thr Leu
130 135 140

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Ser Val Ser Gln Leu Glu Leu Gln Asp Ser Gly Thr Trp Thr Cys Thr
145 150 155 160

Val Leu Gln Asn Gln Lys Lys Val Glu Phe Lys Ile Asp Ile Val Val
165 170 175

Leu Ala Phe Gln Lys
180

<210> 12
<211> 213
<212> PRT
<213> Homo sapiens

<400> 12

Glu Leu Glu Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Ser Ser Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Ala Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp Pro Pro
85 90 95

Arg Tyr Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val
100 105 110

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
115 120 125

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
130 135 140

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
145 150 155 160

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
165 170 175

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Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
180 185 190

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
195 200 205

Lys Ser Phe Asn Arg
210

<210> 13
<211> 229
<212> PRT
<213> Homo sapiens

<400> 13

Gln Val Gln Leu Leu Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp Thr Phe Ile Arg Tyr
20 25 30

Ser Phe Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Ile Thr Ile Leu Asp Val Ala His Tyr Ala Pro His Leu
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser Thr Val Tyr
65 70 75 80

Leu Glu Leu Arg Asn Leu Arg Ser Asp Asp Thr Ala Val Tyr Phe Cys
85 90 95

Ala Gly Val Tyr Glu Gly Glu Ala Asp Glu Gly Glu Tyr Asp Asn Asn
100 105 110

Gly Phe Leu Lys His Trp Gly Gln Gly Thr Leu Val Thr Val Thr Ser
115 120 125

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
130 135 140

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
145 150 155 160

Phe Pro Gln Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
165 170 175

54203-H-PCT-US.ST25.txt

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
180 185 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
195 200 205

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
210 215 220

Lys Val Glu Pro Lys
225